

EXHIBIT II
1988/89
EMISSION DATA FOR
REGULATED AIR CONTAMINANTS
CO, NOX, PM, SO₂, VOC'S

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EXHIBIT II

Origin of Data In Columns

Column A	Manufacturer of the individual emission source.
Column B	Tag Identification Number for the individual piece of equipment.
Column C	ISO Rating. Originated from the manufacturer.
Column D conditions.	Actual Operating Rate is the actual operating rate from field data, corrected to ISO For Turbines: Information from field data. For Heaters: MMBtu/hr= Avg. fuel consumption (mscf/hr)x(10 ³ cf/mscf)x(MMBtu/10 ⁶ Btu)xfuel heat content
Column E	% Rated Capacity is calculated from actual operating rate and manufacturer data. % = Actual operating rate (MMBtu/hr or MHP)x 1/ISO rating (hr/MMBtu or hr/MHP)x100
Column F	Hours of Operation from field data. Partially complete data sets were not used.
Column G	Emission Factor. See description for Column H.
Column H	Origin of Factor.

Emission factors used for analysis are from several sources, identified by A, V, D, S or PERMIT.

S = Source test data used as a basis for emission factor used.

A = AP-42 emission factors, or adjusted from AP-42 factors, as described in Attachments.

V = Emissions data from the manufacturer.

D = Empirically determined emission factor. The turbine manufacturers provided emissions data and fuel consumption for a number of ambient temperatures for their machines. It was found that the emission factor was not a constant throughout the turbines' range of operation. To more accurately describe the emission factor throughout a given turbine operating range, a mathematical function was empirically derived for each turbine, to match the manufacturer emissions data with varying temperature and fuel consumed. In addition, source test data were included into the derivation of the empirical function when such were available. This function was applied to the fuel use and ambient temperature field data, resulting in a narrow range of emission factors throughout the 1.5 years of data examined. An average emission factor was prepared from these results, and used in later computations for emission rates.

Where available, the ambient temperature and percent load, as reported during source tests, were compared with the actual data over the past two years to further substantiate the emission factor used.

PERMIT = Emission limits based on Alaska Air Quality Permit to Operate.

Column I Average Fuel Consumption.

The data for the sources is from field data. Partially complete data was not used. An arithmetic average of monthly fuel consumption was calculated from the previous 1.5 years and presented in the tables.

Column J Maximum Fuel Consumption.

Maximum fuel consumption is the maximum 1 hour fuel used within the calendar year from daily records of fuel use expressed as one hour averages.

Column K Fuel Heat Content.

Heat content of the fuel is from field data. 865 Btu/scf fuel is the field fuel gas.

Column L Emission Rate

The emission rate is the average emission rate, in lbs per hour, and was calculated using the average emission factor and average fuel consumption determined from the previous 1.5 years of data.

$$\text{Average Emission Factor (lb/mscf)} \times \text{average fuel consumption (mscf/hr)} = \text{lb/hr}$$

Column M Actual Emissions.

The actual emissions, in tons per year, are expressed by the average emission rate and the actual hours of operation.

$$\text{Average Emission Rate (lb/hr)} \times \text{hours of operation (hours/year)} \times \text{ton/2000 lb} = \text{tons/year}$$

Column N Potential Emissions

For Turbines:

The potential emissions, in tons per year, are expressed by the potential maximum emission rate and the potential hours of operation in a year.

The potential maximum emission rate is calculated from the maximum emission factor and the maximum 1 hour fuel consumption observed within the last 1.5 years.

The maximum emission factor is the highest average monthly emission factor plus one Standard Deviation, determined from the range field data

$$\text{Model R highest average NO}_x \text{ emission factor} = 0.346, \text{sd} = 0.012$$

$$EF_{\text{Model R}} = 0.358 \text{ lb NO}_x/\text{mscf}$$

The Potential Emissions show the annual emissions at full capacity for full time operation by the following formula:

$$\text{Maximum Emission Rate (lb/hr)} \times (8760 \text{ hr/yr}) \times (\text{ton/2000 lb}) = \text{tons/year}$$

The CO Potential Emissions were estimated in a different manner, due to the fact that CO emissions decrease with increasing fuel consumption. The full range of hourly fuel consumption and emission factor correlations were examined for each turbine type over the previous 1.5 years to identify the worst case CO emissions that occurred. The following information was gathered:

<u>Source</u>	<u>Fuel Consumed</u>	<u>EF*</u>	<u>TPY</u>
GE5251R	217.5MMBtu/hr	0.048 lb/MMBtu	45.72

* The empirical function used to determine the emission factors may not apply well at the limits of the data. The basis of the minimum firing is the minimum practical on-line operation of the compressors.

For Heaters:

The potential emissions were calculated using the actual emission factor (provided by permit) multiplied by the hours available in a year, and multiplied by the maximum fuel use from the field data observed by heater size.

Column O Analyzed Emissions.

The analyzed emissions, in tons per year, are those values presented in previous permit applications that address the particular emission source.

Column P Permitted Emissions

The permitted emissions are those values which represent the most stringent limit established for a particular emissions source and pollutant. These limits may be set by either a state or federal permit limit or may represent a generic source limit (such as NSPS). Two types of permit limits also exist: 1) emission limits and 2) performance limits. Emission limits generally place restrictions on the annual tons per year of a given pollutant which may be released, whereas performance limits place emissions restrictions for individual pollutants in terms like ppm or lb/MMBtu. In many cases, the permit limits have been specified for the facility or unit as a whole, rather than for each piece of equipment individually. For such sources, a permit limit has been selected for individual equipment which represents that equipment's contribution to the limit as a whole. However, such limits are probably not enforceable on individual pieces of equipment.

For some sources and/or pollutants, no permit limit or other regulatory limits exists, and these are noted by NL for "No Limit". Older sources permitted before the PSD and NSPS rules went into effect generally have no limits on any pollutant. Newer sources are generally covered for NOx and CO which are the most significant pollutants emitted. However, limits for SO₂, PM, and HC have not been uniformly applied in previous PSD permit actions, and whether limits exist for these pollutants are dependent on the permits issued.

	A	B	C	D	E	F	G	H	I
1	Source	Tag I.D. No.	ISO Rating	Actual Oper Rate	% Rated Cap	Hours of Oper	Emission Factor (lb/mscf)	Origin of Factor	Fuel Consumption Ave (mscf/hr)
2					Note 1				
3	GE 5251R	18-1801	25.0 MHP	30.998MHP	124	8675.5	0.013	D	312.6
4	GE 5251R	18-1802	25.0MHP	30.926MHP	123.7	8744	0.014	D	310.52
5	GE 5251R	18-1803	25.0MHP	29.278MHP	117.1	8712.5	0.018	D	296.53
6	GE 5251R	18-1804	25.0MHP	32.208MHP	122.3	8641.5	0.014	D	308.67
7	GE 5251R	18-1805	25.0MHP	30.393MHP	121.6	8600	0.015	D	305.55
8	GE 5251RATP	18-1806	25.0MHP	30.627MHP	122.5	8618.5	0.014	D	308.09
9	GE 5251R	18-1807	25.0MHP	30.769MHP	123.1	8774	0.014	D	308.55
10	GE 5251R	18-1808	25.0MHP	31.160MHP	124.6	8580	0.013	D	313.64
11	GE 5251R	18-1809	25.0MHP	31.051MHP	124.2	8777	0.014	D	310.29
12	GE 5251R	18-1810	25.0MHP	31.210MHP	124.8	8777	0.013	D	312.37
13	GE 5251R	18-1811	25.0MHP	30.947MHP	123.8	8474.5	0.013	D	312.02
14	GE 5251R	18-1812	25.0MHP	31.167MHP	124.7	8775.5	0.013	D	313.29
15	GE 5251R	18-1813	25.0MHP	26.107MHP	104.4	8594	0.037	D	270.28
16									
17	Broach	18-1491	28.3MMBtu	28.42MMBtu	100.4	5846.5	0.016	PERMIT	32.88
18	Broach	18-1492	28.3MMBtu	28.42MMBtu	100.4	6967.5	0.016	PERMIT	32.88
19									
20	Cummings	18-1522	255HPDiesel	255HPDiesel	100	523.03 g/hp-hr		A	- -
21									
22	Gen Motors	18-2897	2500KW	3.6MHP		963.03 g/hp-hr		A	- -
23	FFCU								
24									
25	BS&B	21-1239	2.3MMBtu	2.305MMBtu	100.2	338.7	0.016	PERMIT	2.665
26	BS&B	21-1240	2.3MMBtu	2.30MMBtu	100	320.5	0.016	PERMIT	2.66
27	Eclipse	21-1401	10.6MMBtu	9.53MMBtu	89.9	6748	0.016	PERMIT	11.03
28	Eclipse	21-1411	10.6MMBtu	9.31MMBtu	87.8	2621	0.016	PERMIT	10.77
29									
30									
31									
32									
33									

Note 1. 1988 was a Leap Year, and had 8784 hours.

	J	K	L	M	N	O	P
1	Fuel Consumption	Fuel Heat Content	Emission Rate	Actual Emissions	Potential Emissions	Analyzed Emissions	Permitted Emissions
2	Max (mscf/hr)	(Btu/scf)	(lb/hr)	(tpy)	(tpy)	(tpy)	(tpy)
3	335.26	865	4.06	17.61	45.72	128.25	NL
4	335.26	865	4.35	19.02	45.72	128.25	NL
5	335.26	865	5.33	23.22	45.72	128.25	NL
6	335.26	865	4.32	18.67	45.72	128.25	NL
7	335.26	865	4.58	19.69	45.72	128.25	NL
8	335.26	865	4.31	18.57	45.72	128.25	NL
9	335.26	865	4.32	18.95	45.72	128.25	NL
10	335.26	865	4.08	17.5	45.72	128.25	NL
11	335.26	865	4.34	19.05	45.72	128.25	NL
12	335.26	865	4.06	17.81	45.72	128.25	NL
13	335.26	865	4.06	17.2	45.72	128.25	NL
14	335.26	865	4.07	17.86	45.72	128.25	NL
15	335.26	865	10	42.97	45.72	119.9	120
16							
17	32.88	865	0.53	1.54	2.3	1.95	NL
18	32.88	865	0.53	1.83	2.3	1.95	NL
19							
20	--		1.7	0.044	0.044	--	--
21							
22	--	865	24.05	1.15	1.15	--	--
23							
24							
25	2.67	865	0.04	0.007	0.19	0	NL
26	2.67	865	0.04	0.007	0.19	0	NL
27	20.29	865	0.18	0.6	1.42	0	NL
28	20.29	865	0.17	0.23	1.42	0	NL
29							
30	TOTAL ALL SOURCES						
31	WITH PERMIT LIMITS			42.97	45.72	119.9	
32							
33	TOTAL ALL SOURCES			273.528	603.374	1662.8	

A	B	C	D	E	F	G	H	I
Source	Tag I.D. No.	ISO Rating	Actual Oper Rate	% Rated Cap	Hours of Oper	Emission Factor	Origin of Factor	Fuel Consumption
				Note 2	(lb/mscf)			Ave (mscf/hr)
3	GE 5251R	18-1801	25.0 MHP	30.904MHP	123.6	4335.7	0.013	D
4	GE 5251R	18-1802	25.0MHP	30.573MHP	122.3	4186.5	0.014	D
5	GE 5251R	18-1803	25.0MHP	29.825MHP	119	4313.4	0.017	D
6	GE 5251R	18-1804	25.0MHP	30.473MHP	121.9	4314.3	0.015	D
7	GE 5251R	18-1805	25.0MHP	30.518MHP	122.1	4334.6	0.015	D
8	GE 5251RATP	18-1806	25.0MHP	30.947MHP	123.8	4139.5	0.015	D
9	GE 5251R	18-1807	25.0MHP	29.915MHP	119.7	4246	0.015	D
10	GE 5251R	18-1808	25.0MHP	30.079MHP	120.3	4311.8	0.015	D
11	GE 5251R	18-1809	25.0MHP	30.603MHP	122.4	4185.4	0.015	D
12	GE 5251R	18-1810	25.0MHP	30.534MHP	122.1	4149.7	0.014	D
13	GE 5251R	18-1811	25.0MHP	30.873MHP	123.9	4314.7	0.015	D
14	GE 5251R	18-1812	25.0MHP	31.167MHP	124.7	4184.5	0.013	D
15	GE 5251R	18-1813	25.0MHP	30.377MHP	121.5	4203.6	0.016	D
16								
17	Broach	18-1491	28.3MMBtu	28.42MMBtu	100.4	3425.8	0.016	PERMIT
18	Broach	18-1492	28.3MMBtu	28.42MMBtu	100.4	4086.3	0.016	PERMIT
19								
20	Cummings	18-1522	255HPDiesel	255HPDiesel	100	523.03 g/hp-hr	A	- -
21								
22	Gen Motors	18-2897	2500KW	3.6MHP		963.03 g/hp-hr	A	- -
23	FFGU							
24								
25	BS&B	21-1239	2.3MMBtu	*	0	0	0.016	PERMIT
26	BS&B	21-1240	2.3MMBtu	*	0	0	0.016	PERMIT
27	Eclipse	21-1401	10.6MMBtu	12.07MMBtu	113.9	4143	0.016	PERMIT
28	Eclipse	21-1411	10.6MMBtu	11.13MMBtu	90.8	201	0.016	PERMIT
29								
30								
31								
32								
33								

Note 2. Hours of Operation are for the first 6 months of 1989.

Note3. Actual hours of operation were doubled to represent all of 1989 for calculation purposes.

* The BS&B heaters were taken off-line in 1988, and decommissioned. These sources did not operate in 1989.

	J	K	L	M	N	O	P
1	Fuel Consumption	Fuel Heat Content	Emission Rate	Actual Emissions	Potential Emissions	Analyzed Emissions	Permitted Emissions
2	Max (mscf/hr)	(Btu/scf)	(lb/hr)	(tpy)	(tpy) Note 3	(tpy) Note 3	(tpy)
3	335.26	865	4.05	17.57	45.72	128.25	NL
4	335.26	865	4.34	18.17	45.72	128.25	NL
5	335.26	865	5.1	21.99	45.72	128.25	NL
6	335.26	865	4.6	19.85	45.72	128.25	NL
7	335.26	865	4.58	19.84	45.72	128.25	NL
8	335.26	865	4.62	19.11	45.72	128.25	NL
9	335.26	865	4.54	19.28	45.72	128.25	NL
10	335.26	865	4.58	19.75	45.72	128.25	NL
11	335.26	865	4.59	19.2	45.72	128.25	NL
12	335.26	865	4.31	17.87	45.72	128.25	NL
13	335.26	865	4.59	19.82	45.72	128.25	NL
14	335.26	865	4.06	16.97	45.72	128.25	NL
15	335.26	865	4.88	20.53	45.72	119.9	120
16							
17	32.88	865	0.53	1.8	2.3	1.95	NL
18	32.88	865	0.53	2.15	2.3	1.95	NL
19							
20	- -		1.7	0.044	0.044	- -	- -
21							
22	- -	865	24.05	1.15	1.15	- -	- -
23							
24							
25	0	865	0	0	0	0	NL
26	0	865	0	0	0	0	NL
27	20.29	865	0.22	0.93	1.42	0	NL
28	20.29	865	0.18	0.04	1.42	0	NL
29							
30	TOTAL ALL SOURCES						
31	WITH PERMIT LIMITS			20.53	45.72	119.9	129.94
32							
33	TOTAL ALL SOURCES			256.134	602.994	1662.8	

CCP NOX 1988

A	B	C	D	E	F	G	H	I	
1	Source	Tag I.D. No.	ISO Rating	Actual Oper Rate	% Rated Cap	Hours of Oper	Emission Factor	Origin of Factor	Fuel Consumption
2						Note 1 (lb/mscf)			Ave (mscf/hr)
3	GE 5251R	18-1801	25.0 MHP	30.998MHP	124	8675.5	0.35	D	312.6
4	GE 5251R	18-1802	25.0MHP	30.926MHP	123.7	8744	0.349	D	310.52
5	GE 5251R	18-1803	25.0MHP	29.278MHP	117.1	8712.5	0.341	D	296.53
6	GE 5251R	18-1804	25.0MHP	32.208MHP	122.3	8641.5	0.348	D	308.67
7	GE 5251R	18-1805	25.0MHP	30.393MHP	121.6	8600	0.346	D	305.55
8	GE 5251RATP	18-1806	25.0MHP	30.627MHP	122.5	8618.5	0.348	D	308.09
9	GE 5251R	18-1807	25.0MHP	30.769MHP	123.1	8774	0.348	D	308.55
10	GE 5251R	18-1808	25.0MHP	31.160MHP	124.6	8580	0.351	D	313.64
11	GE 5251R	18-1809	25.0MHP	31.051MHP	124.2	8777	0.349	D	310.29
12	GE 5251R	18-1810	25.0MHP	31.210MHP	124.8	8777	0.35	D	312.37
13	GE 5251R	18-1811	25.0MHP	30.947MHP	123.8	8474.5	0.35	D	312.02
14	GE 5251R	18-1812	25.0MHP	31.167MHP	124.7	8775.5	0.35	D	313.29
15	GE 5251R	18-1813	25.0MHP	26.107MHP	104.4	8594	0.326	D	270.28
16									
17	Broach	18-1491	28.3MMBtu	28.42MMBtu	100.4	5846.5	0.061	V	32.88
18	Broach	18-1492	28.3MMBtu	28.42MMBtu	100.4	6967.5	0.061	V	32.88
19									
20	Cummings	18-1522	255HPDiesel	255HPDiesel	100	5214.0g/hp-hr		A	- -
21									
22	Gen Motors	18-2897	2500KW	3.6MHP		9614.0 g/hp-hr		A	- -
23	FFGU								
24									
25	BS&B	21-1239	2.3MMBtu	2.305MMBtu	100.2	338.7	0.0865	PERMIT	2.665
26	BS&B	21-1240	2.3MMBtu	2.30MMBtu	100	320.5	0.0865	PERMIT	2.66
27	Eclipse	21-1401	10.6MMBtu	9.53MMBtu	89.9	6748	0.0865	PERMIT	11.03
28	Eclipse	21-1411	10.6MMBtu	9.31MMBtu	87.8	2621	0.0865	PERMIT	10.77
29									
30									
31									
32									
33									

Note 1. 1988 was a Leap Year, and had 8784 hours.

CCP NOX 1988

	J	K	L	M	N	O	P
1	Fuel Consumption Max (mscf/hr)	Fuel Heat Content (Btu/scf)	Emission Rate (lb/hr)	Actual Emissions (tpy)	Potential Emissions (tpy)	Analyzed Emissions (tpy)	Permitted Emissions (tpy)
3	335.26	865	109.41	474.59	525.7	477.42	NL
4	335.26	865	108.37	473.8	525.7	477.42	NL
5	335.26	865	101.12	440.49	525.7	477.42	NL
6	335.26	865	107.42	464.12	525.7	477.42	NL
7	335.26	865	105.72	454.6	525.7	477.42	NL
8	335.26	865	107.22	462.02	525.7	477.42	NL
9	335.26	865	107.38	471.06	525.7	477.42	NL
10	335.26	865	110.09	472.28	525.7	477.42	NL
11	335.26	865	108.29	475.24	525.7	477.42	NL
12	335.26	865	109.33	479.79	525.7	477.42	NL
13	335.26	865	109.21	462.74	525.7	477.42	NL
14	335.26	865	109.65	481.12	525.7	477.42	NL
15	335.26	865	88.11	378.61	525.7	645.9	646
16							
17	32.88	865	2.01	5.86	8.78	26.65	NL
18	32.88	865	2.01	6.99	8.78	26.65	NL
19							
20	--		7.87	0.205	0.205	--	--
21							
22	--	865	111.11	5.33	5.33	--	--
23							
24							
25	2.67	865	0.23	0.039	1.01	10.05	NL
26	2.67	865	0.23	0.037	1.01	10.05	NL
27	20.29	865	0.95	3.22	7.69	10.05	NL
28	20.29	865	0.93	1.22	7.69	10.05	NL
29							
30	TOTAL ALL SOURCES						
31	WITH PERMIT LIMITS			378.61	525.7	645.9	646
32							
33	TOTAL ALL SOURCES			6013.361	6874.595	6468.44	

A	B	C	D	E	F	G	H	I	
1	Source	Tag I.D. No.	ISO Rating	Actual Oper Rate	% Rated Cap	Hours of Oper	Emission Factor	Origin of Factor	Fuel Consumption
2					Note 2	(lb/mscf)			Ave (mscf/hr)
3	GE 5251R	18-1801	25.0 MHP	30.904MHP	123.6	4335.7	0.349	D	311.8
4	GE 5251R	18-1802	25.0MHP	30.573MHP	122.3	4186.5	0.349	D	309.94
5	GE 5251R	18-1803	25.0MHP	29.825MHP	119	4313.4	0.343	D	299.88
6	GE 5251R	18-1804	25.0MHP	30.473MHP	121.9	4314.3	0.347	D	306.7
7	GE 5251R	18-1805	25.0MHP	30.518MHP	122.1	4334.6	0.348	D	305.08
8	GE 5251RATP	18-1806	25.0MHP	30.947MHP	123.8	4139.5	0.348	D	307.75
9	GE 5251R	18-1807	25.0MHP	29.915MHP	119.7	4246	0.344	D	302.66
10	GE 5251R	18-1808	25.0MHP	30.079MHP	120.3	4311.8	0.346	D	305.43
11	GE 5251R	18-1809	25.0MHP	30.603MHP	122.4	4185.4	0.346	D	305.9
12	GE 5251R	18-1810	25.0MHP	30.534MHP	122.1	4149.7	0.347	D	307.51
13	GE 5251R	18-1811	25.0MHP	30.873MHP	123.9	4314.7	0.35	D	306.24
14	GE 5251R	18-1812	25.0MHP	31.167MHP	124.7	4184.5	0.35	D	312.02
15	GE 5251R	18-1813	25.0MHP	30.377MHP	121.5	4203.6	0.346	D	305.2
16									
17	Broach	18-1491	28.3MMBtu	28.42MMBtu	100.4	3425.8	0.061	V	32.88
18	Broach	18-1492	28.3MMBtu	28.42MMBtu	100.4	4086.3	0.061	V	32.88
19									
20	Cummings	18-1522	255HPDiesel	255HPDiesel	100	52	14.0 g/hp-hr	A	- -
21									
22	Gen Motors	18-2897	2500KW	3.6MHP		96	14.0 g/hp-hr	A	- -
23	FFGU								
24									
25	BS&B	21-1239	2.3MMBtu	*	0	0	0.0865	PERMIT	0
26	BS&B	21-1240	2.3MMBtu	*	0	0	0.0865	PERMIT	0
27	Eclipse	21-1401	10.6MMBtu	12.07MMBtu	113.9	4143	0.0865	PERMIT	13.97
28	Eclipse	21-1411	10.6MMBtu	11.13MMBtu	90.8	201	0.0865	PERMIT	11.13
29									
30									
31									
32									
33									

Note 2. Hours of Operation are for the first 6 months of 1989.

Note3. Actual hours of operation were doubled to represent all of 1989 for calculation purposes.

* The BS&B heaters were taken off-line in 1988, and decommissioned. These sources did not operate in 1989.

CCP NOX 1989

	J	K	L	M	N	O	P
1	Fuel Consumption	Fuel Heat Content	Emission Rate	Actual Emissions	Potential Emissions	Analyzed Emissions	Permitted Emissions
2	Max (mscf/hr)	(Btu/scf)	(lb/hr)	(tpy) Note 3	(tpy) Note 3	(tpy)	(tpy)
3	335.26	865	108.82	471.81	525.7	477.42	NL
4	335.26	865	108.17	452.85	525.7	477.42	NL
5	335.26	865	102.86	443.68	525.7	477.42	NL
6	335.26	865	106.42	459.15	525.7	477.42	NL
7	335.26	865	106.17	460.2	525.7	477.42	NL
8	335.26	865	107.1	443.33	525.7	477.42	NL
9	335.26	865	104.12	442.07	525.7	477.42	NL
10	335.26	865	105.68	455.67	525.7	477.42	NL
11	335.26	865	105.84	442.99	525.7	477.42	NL
12	335.26	865	106.71	442.8	525.7	477.42	NL
13	335.26	865	107.18	462.47	525.7	477.42	NL
14	335.26	865	109.21	456.98	525.7	477.42	NL
15	335.26	865	105.6	443.9	525.7	645.9	646
16							
17	32.88	865	2.01	6.87	8.78	26.65	NL
18	32.88	865	2.01	8.2	8.78	26.65	NL
19							
20	- -		7.87	0.205	0.205	- -	- -
21							
22	- -	865	111.11	5.33	5.33	- -	- -
23							
24							
25	0	865	0	0	0	10.05	NL
26	0	865	0	0	0	10.05	NL
27	20.29	865	1.21	5.01	7.69	10.05	NL
28	20.29	865	0.96	0.19	7.69	10.05	NL
29							
30	TOTAL ALL SOURCES						
31	WITH PERMIT LIMITS			443.9	525.7	645.9	646
32							
33	TOTAL ALL SOURCES			5903.705	6874.595	6468.44	

A	B	C	D	E	F	G	H	I
Source	Tag I.D. No.	ISO Rating	Actual Oper Rate	% Rated Cap	Hours of Oper	Emission Factor Note 1 (lb/mscf)	Origin of Factor	Fuel Consumption Ave (mscf/hr)
1	GE 5251R	18-1801	25.0 MHP	30.998MHP	124	8675.5	0.0025	A 312.6
2	GE 5251R	18-1802	25.0MHP	30.926MHP	123.7	8744	0.0025	A 310.52
3	GE 5251R	18-1803	25.0MHP	29.278MHP	117.1	8712.5	0.0025	A 296.53
4	GE 5251R	18-1804	25.0MHP	32.208MHP	122.3	8641.5	0.0025	A 308.67
5	GE 5251R	18-1805	25.0MHP	30.393MHP	121.6	8600	0.0025	A 305.55
6	GE 5251RATP	18-1806	25.0MHP	30.627MHP	122.5	8618.5	0.0025	A 308.09
7	GE 5251R	18-1807	25.0MHP	30.769MHP	123.1	8774	0.0025	A 308.55
8	GE 5251R	18-1808	25.0MHP	31.160MHP	124.6	8580	0.0025	A 313.64
9	GE 5251R	18-1809	25.0MHP	31.051MHP	124.2	8777	0.0025	A 310.29
10	GE 5251R	18-1810	25.0MHP	31.210MHP	124.8	8777	0.0025	A 312.37
11	GE 5251R	18-1811	25.0MHP	30.947MHP	123.8	8474.5	0.0025	A 312.02
12	GE 5251R	18-1812	25.0MHP	31.167MHP	124.7	8775.5	0.0025	A 313.29
13	GE 5251R	18-1813	25.0MHP	26.107MHP	104.4	8594	0.0025	A 270.28
14								
15	Broach	18-1491	28.3MMBtu	28.42MMBtu	100.4	5846.5	0.0025	A 32.88
16	Broach	18-1492	28.3MMBtu	28.42MMBtu	100.4	6967.5	0.0025	A 32.88
17								
18	Cummings	18-1522	255HPDiesel	255HPDiesel	100	521.00 g/hp-hr	A - -	
19								
20	Gen Motors	18-2897	2500KW	3.6MHP		961.00g/hp-hr	A - -	
21	FFGU							
22								
23								
24								
25	BS&B	21-1239	2.3MMBtu	2.305MMBtu	100.2	338.7	0.0025	A 2.665
26	BS&B	21-1240	2.3MMBtu	2.30MMBtu	100	320.5	0.0025	A 2.66
27	Eclipse	21-1401	10.6MMBtu	9.53MMBtu	89.9	6748	0.0025	A 11.03
28	Eclipse	21-1411	10.6MMBtu	9.31MMBtu	87.8	2621	0.0025	A 10.77
29								
30								
31								
32								
33								

Note 1. 1988 was a Leap Year, and had 8784 hours.

	J	K	L	M	N	O	P
1	Fuel Consumption	Fuel Heat Content	Emission Rate	Actual Emissions	Potential Emissions	Analyzed Emissions	Permitted Emissions
2	Max (mscf/hr)	(Btu/scf)	(lb/hr)	(tpy)	(tpy)	(tpy)	(tpy)
3	335.26	865	0.78	3.39	3.67	16.2	NL
4	335.26	865	0.78	3.39	3.67	16.2	NL
5	335.26	865	0.74	3.23	3.67	16.2	NL
6	335.26	865	0.77	3.33	3.67	16.2	NL
7	335.26	865	0.76	3.28	3.67	16.2	NL
8	335.26	865	0.77	3.32	3.6	16.2	NL
9	335.26	865	0.77	3.38	3.67	16.2	NL
10	335.26	865	0.78	3.36	3.67	16.2	NL
11	335.26	865	0.78	3.4	3.67	16.2	NL
12	335.26	865	0.78	3.43	3.67	16.2	NL
13	335.26	865	0.78	3.31	3.67	16.2	NL
14	335.26	865	0.78	3.44	3.67	16.2	NL
15	335.26	865	0.68	2.9	3.67	16	16
16							
17	32.88	865	0.08	0.24	0.36	1.15	NL
18	32.88	865	0.08	0.29	0.36	1.15	NL
19							
20	- -	- -	0.56	0.015	0.015	- -	- -
21							
22	- -	865	7.94	0.38	0.38	- -	- -
23							
24							
25	2.67	865	0.01	0.001	0.03	0.9	NL
26	2.67	865	0.01	0.001	0.03	0.9	NL
27	20.29	865	0.03	0.09	0.22	0.9	NL
28	20.29	865	0.03	0.04	0.22	0.9	NL
29							
30	TOTAL ALL SOURCES						
31	WITH PERMIT LIMITS			2.9	3.67	16	16
32							
33	TOTAL ALL SOURCES			44.217	49.255	216.3	

A	B	C	D	E	F	G	H	I	
1	Source	Tag I.D. No.	ISO Rating	Actual Oper Rate	% Rated Cap	Hours of Oper	Emission Factor	Origin of Factor	Fuel Consumption
2					Note 2	(lb/mscf)			Ave (mscf/hr)
3	GE 5251R	18-1801	25.0 MHP	30.904MHP	123.6	4335.7	0.0025	A	311.8
4	GE 5251R	18-1802	25.0MHP	30.573MHP	122.3	4186.5	0.0025	A	309.94
5	GE 5251R	18-1803	25.0MHP	29.825MHP	119	4313.4	0.0025	A	299.88
6	GE 5251R	18-1804	25.0MHP	30.473MHP	121.9	4314.3	0.0025	A	306.7
7	GE 5251R	18-1805	25.0MHP	30.518MHP	122.1	4334.6	0.0025	A	305.08
8	GE 5251RATP	18-1806	25.0MHP	30.947MHP	123.8	4139.5	0.0025	A	307.75
9	GE 5251R	18-1807	25.0MHP	29.915MHP	119.7	4246	0.0025	A	302.66
10	GE 5251R	18-1808	25.0MHP	30.079MHP	120.3	4311.8	0.0025	A	305.43
11	GE 5251R	18-1809	25.0MHP	30.603MHP	122.4	4185.4	0.0025	A	305.9
12	GE 5251R	18-1810	25.0MHP	30.534MHP	122.1	4149.7	0.0025	A	307.51
13	GE 5251R	18-1811	25.0MHP	30.873MHP	123.9	4314.7	0.0025	A	306.24
14	GE 5251R	18-1812	25.0MHP	31.167MHP	124.7	4184.5	0.0025	A	312.02
15	GE 5251R	18-1813	25.0MHP	30.377MHP	121.5	4203.6	0.0025	A	305.2
16									
17	Broach	18-1491	28.3MMBtu	28.42MMBtu	100.4	3425.8	0.0025	A	32.88
18	Broach	18-1492	28.3MMBtu	28.42MMBtu	100.4	4086.3	0.0025	A	32.88
19									
20	Cummings	18-1522	255HPDiesel	255HPDiesel	100	521.00g/hp-hr		A	--
21									
22	Gen Motors	18-2897	2500KW	3.6MHP		961.00g/hp-hr		A	--
23	FFGU								
24									
25	BS&B	21-1239	2.3MMBtu	*	0	0	0.0025	A	0
26	BS&B	21-1240	2.3MMBtu	*	0	0	0.0025	A	0
27	Eclipse	21-1401	10.6MMBtu	12.07MMBtu	113.9	4143	0.0025	A	13.97
28	Eclipse	21-1411	10.6MMBtu	11.13MMBtu	90.8	201	0.0025	A	11.13
29									
30									
31									
32									
33									

Note 2. Hours of Operation are for the first 6 months of 1989.

Note3. Actual hours of operation were doubled to represent all of 1989 for calculation purposes.

* The BS&B heaters were taken off-line in 1988, and decommissioned. These sources did not operate in 1989.

	J	K	L	M	N	O	P
1	Fuel Consumption	Fuel Heat Content	Emission Rate	Actual Emissions	Potential Emissions	Analyzed Emissions	Permitted Emissions
2	Max (mscf/hr)	(Btu/scf)	(lb/hr)	(tpy) Note 3	(tpy) Note 3	(tpy)	(tpy)
3	335.26	865	0.78	3.38	3.67	16.2	NL
4	335.26	865	0.77	3.24	3.67	16.2	NL
5	335.26	865	0.75	3.23	3.67	16.2	NL
6	335.26	865	0.77	3.31	3.67	16.2	NL
7	335.26	865	0.76	3.31	3.67	16.2	NL
8	335.26	865	0.77	3.18	3.6	16.2	NL
9	335.26	865	0.76	3.21	3.67	16.2	NL
10	335.26	865	0.76	3.29	3.67	16.2	NL
11	335.26	865	0.76	3.2	3.67	16.2	NL
12	335.26	865	0.77	3.19	3.67	16.2	NL
13	335.26	865	0.77	3.3	3.67	16.2	NL
14	335.26	865	0.78	3.26	3.67	16.2	NL
15	335.26	865	0.76	3.21	3.67	16	16
16							
17	32.88	865	0.08	0.28	0.36	1.15	NL
18	32.88	865	0.08	0.34	0.36	1.15	NL
19							
20	- -	0.56	0.015	0.015	- -	- -	
21							
22	- -	865	7.94	0.38	0.38	- -	
23							
24							
25	0	865	0	0	0	0.9	NL
26	0	865	0	0	0	0.9	NL
27	20.29	865	0.03	0.14	0.22	0.9	NL
28	20.29	865	0.03	0.01	0.22	0.9	NL
29							
30	TOTAL ALL SOURCES						
31	WITH PERMIT LIMITS			3.21	3.67	16	16
32							
33	TOTAL ALL SOURCES			43.475	49.195	216.3	

	A	B	C	D	E	F	G	H	I
1	Source	Tag I.D. No.	ISO Rating	Actual Oper Rate	% Rated Cap	Hours of Oper	Emission Factor Note 1 (lb/mscf)	Origin of Factor	Fuel Consumption Ave (mscf/hr)
2									
3	GE 5251R	18-1801	25.0 MHP	30.998MHP	124	8675.5	0.002	S	312.6
4	GE 5251R	18-1802	25.0MHP	30.926MHP	123.7	8744	0.002	S	310.52
5	GE 5251R	18-1803	25.0MHP	29.278MHP	117.1	8712.5	0.002	S	296.53
6	GE 5251R	18-1804	25.0MHP	32.208MHP	122.3	8641.5	0.002	S	308.67
7	GE 5251R	18-1805	25.0MHP	30.393MHP	121.6	8600	0.002	S	305.55
8	GE 5251RATP	18-1806	25.0MHP	30.627MHP	122.5	8618.5	0.002	S	308.09
9	GE 5251R	18-1807	25.0MHP	30.769MHP	123.1	8774	0.002	S	308.55
10	GE 5251R	18-1808	25.0MHP	31.160MHP	124.6	8580	0.002	S	313.64
11	GE 5251R	18-1809	25.0MHP	31.051MHP	124.2	8777	0.002	S	310.29
12	GE 5251R	18-1810	25.0MHP	31.210MHP	124.8	8777	0.002	S	312.37
13	GE 5251R	18-1811	25.0MHP	30.947MHP	123.8	8474.5	0.002	S	312.02
14	GE 5251R	18-1812	25.0MHP	31.167MHP	124.7	8775.5	0.002	S	313.29
15	GE 5251R	18-1813	25.0MHP	26.107MHP	104.4	8594	0.002	S	270.28
16									
17	Broach	18-1491	28.3MMBtu	28.42MMBtu	100.4	5846.5	0.003	A	32.88
18	Broach	18-1492	28.3MMBtu	28.42MMBtu	100.4	6967.5	0.003	A	32.88
19									
20	Cummings	18-1522	255HPDiesel	255HPDiesel	100	520.931g/hp-hr		A	- -
21									
22	Gen Motors	18-2897	2500KW	3.6MHP	- -	960.931g/hp-hr		A	- -
23	FFGU								
24									
25	BS&B	21-1239	2.3MMBtu	2.305MMBtu	100.2	338.7	0.003	A	2.665
26	BS&B	21-1240	2.3MMBtu	2.30MMBtu	100	320.5	0.003	A	2.66
27	Eclipse	21-1401	10.6MMBtu	9.53MMBtu	89.9	6748	0.003	A	11.03
28	Eclipse	21-1411	10.6MMBtu	9.31MMBtu	87.8	2621	0.003	A	10.77
29									
30									
31									
32									
33									

Note 1. 1988 was a Leap Year, and had 8784 hours.

CCP SO2 1988

	J	K	L	M	N	O	P
1	Fuel Consumption	Fuel Heat Content	Emission Rate	Actual Emissions	Potential Emissions	Analyzed Emissions	Permitted Emissions
2	Max (mscf/hr)	(Btu/scf)	(lb/hr)	(tpy)	(tpy)	(tpy)	(tpy)
3	335.26	865	0.63	2.71	2.94	0.69	NL
4	335.26	865	0.62	2.72	2.94	0.69	NL
5	335.26	865	0.59	2.58	2.94	0.69	NL
6	335.26	865	0.62	2.67	2.94	0.69	NL
7	335.26	865	0.61	2.63	2.94	0.69	NL
8	335.26	865	0.62	2.66	2.94	0.69	NL
9	335.26	865	0.62	2.71	2.94	0.69	NL
10	335.26	865	0.63	2.69	2.94	0.69	NL
11	335.26	865	0.62	2.72	2.94	0.69	NL
12	335.26	865	0.62	2.74	2.94	0.69	NL
13	335.26	865	0.62	2.64	2.94	0.69	NL
14	335.26	865	0.63	2.75	2.94	0.69	NL
15	335.26	865	0.54	2.32	2.94	0.6	NL
16							
17	32.88	865	0.1	0.29	0.43	0.05	NL
18	32.88	865	0.1	0.34	0.43	0.05	NL
19							
20	- -	- -	0.52	0.014	0.014	- -	- -
21							
22	- -	865	7.39	0.35	0.35	- -	- -
23							
24							
25	2.67	865	0.01	0.001	0.04	0	NL
26	2.67	865	0.01	0.001	0.04	0	NL
27	20.29	865	0.03	0.11	0.27	0	NL
28	20.29	865	0.03	0.04	0.27	0	NL
29							
30	TOTAL ALL SOURCES						
31	WITH PERMIT LIMITS						
32							
33	TOTAL ALL SOURCES			35.686	40.064	8.98	

A	B	C	D	E	F	G	H	I	
1	Source	Tag I.D. No.	ISO Rating	Actual Oper Rate	% Rated Cap	Hours of Oper	Emission Factor (lb/mscf)	Origin of Factor	Fuel Consumption Ave (mscf/hr)
2					Note 2				
3	GE 5251R	18-1801	25.0 MHP	30.904MHP	123.6	4335.7	0.002	S	311.8
4	GE 5251R	18-1802	25.0MHP	30.573MHP	122.3	4186.5	0.002	S	309.94
5	GE 5251R	18-1803	25.0MHP	29.825MHP	119	4313.4	0.002	S	299.88
6	GE 5251R	18-1804	25.0MHP	30.473MHP	121.9	4314.3	0.002	S	306.7
7	GE 5251R	18-1805	25.0MHP	30.518MHP	122.1	4334.6	0.002	S	305.08
8	GE 5251RATP	18-1806	25.0MHP	30.947MHP	123.8	4139.5	0.002	S	307.75
9	GE 5251R	18-1807	25.0MHP	29.915MHP	119.7	4246	0.002	S	302.66
10	GE 5251R	18-1808	25.0MHP	30.079MHP	120.3	4311.8	0.002	S	305.43
11	GE 5251R	18-1809	25.0MHP	30.603MHP	122.4	4185.4	0.002	S	305.9
12	GE 5251R	18-1810	25.0MHP	30.534MHP	122.1	4149.7	0.002	S	307.51
13	GE 5251R	18-1811	25.0MHP	30.873MHP	123.9	4314.7	0.002	S	306.24
14	GE 5251R	18-1812	25.0MHP	31.167MHP	124.7	4184.5	0.002	S	312.02
15	GE 5251R	18-1813	25.0MHP	30.377MHP	121.5	4203.6	0.002	S	305.2
16									
17	Broach	18-1491	28.3MMBtu	28.42MMBtu	100.4	3425.8	0.003	A	32.88
18	Broach	18-1492	28.3MMBtu	28.42MMBtu	100.4	4086.3	0.003	A	32.88
19									
20	Cummings	18-1522	255HPDiesel	255HPDiesel	100	521.12g/hp-hr		A	- -
21									
22	Gen Motors	18-2897	2500KW	3.6MHP		961.12g/hp-hr		A	- -
23	FFGU								
24									
25	BS&B	21-1239	2.3MMBtu	*	0	0	0.003	A	0
26	BS&B	21-1240	2.3MMBtu	*	0	0	0.003	A	0
27	Eclipse	21-1401	10.6MMBtu	12.07MMBtu	113.9	4143	0.003	A	13.97
28	Eclipse	21-1411	10.6MMBtu	11.13MMBtu	90.8	201	0.003	A	11.13
29									
30									
31									
32									
33									

Note 2. Hours of Operation are for the first 6 months of 1989.

Note3. Actual hours of operation were doubled to represent all of 1989 for calculation purposes.

* The BS&B heaters were taken off-line in 1988, and decommissioned. These sources did not operate in 1989.

	J	K	L	M	N	O	P
1	Fuel Consumption	Fuel Heat Content	Emission Rate	Actual Emissions	Potential Emissions	Analyzed Emissions	Permitted Emissions
2	Max (mscf/hr)	(Btu/scf)	(lb/hr)	(tpy) Note 3	(tpy) Note 3	(tpy)	(tpy)
3	335.26	865	0.62	2.7	2.94	0.69	NL
4	335.26	865	0.62	2.6	2.94	0.69	NL
5	335.26	865	0.6	2.59	2.94	0.69	NL
6	335.26	865	0.61	2.65	2.94	0.69	NL
7	335.26	865	0.61	2.64	2.94	0.69	NL
8	335.26	865	0.62	2.55	2.94	0.69	NL
9	335.26	865	0.61	2.57	2.94	0.69	NL
10	335.26	865	0.61	2.63	2.94	0.69	NL
11	335.26	865	0.61	2.56	2.94	0.69	NL
12	335.26	865	0.62	2.55	2.94	0.69	NL
13	335.26	865	0.61	2.64	2.94	0.69	NL
14	335.26	865	0.62	2.61	2.94	0.69	NL
15	335.26	865	0.61	2.57	2.94	0.6	NL
16							
17	32.88	865	0.1	0.34	0.43	0.05	NL
18	32.88	865	0.1	0.4	0.43	0.05	NL
19							
20	- -	- -	0.52	0.014	0.014	- -	- -
21							
22	- -	865	7.39	0.35	0.35	- -	- -
23							
24							
25	0	865	0	0	0	0	NL
26	0	865	0	0	0	0	NL
27	20.29	865	0.04	0.17	0.27	0	NL
28	20.29	865	0.03	0.01	0.27	0	NL
29							
30	TOTAL ALL SOURCES						
31	WITH PERMIT LIMITS						
32							
33	TOTAL ALL SOURCES			35.144	39.984	8.98	

	A	B	C	D	E	F	G	H	I
1	Source	Tag I.D. No.	ISO Rating	Actual Oper Rate	% Rated Cap	Hours of Oper	Emission Factor	Origin of Factor	Fuel Consumption
2						Note 1 (lb/mscf)			Ave (mscf/hr)
3	GE 5251R	18-1801	25.0 MHP	30.998MHP	124	8675.5	0.0023	A	312.6
4	GE 5251R	18-1802	25.0MHP	30.926MHP	123.7	8744	0.0023	A	310.52
5	GE 5251R	18-1803	25.0MHP	29.278MHP	117.1	8712.5	0.0023	A	296.53
6	GE 5251R	18-1804	25.0MHP	32.208MHP	122.3	8641.5	0.0023	A	308.67
7	GE 5251R	18-1805	25.0MHP	30.393MHP	121.6	8600	0.0023	A	305.55
8	GE 5251RATP	18-1806	25.0MHP	30.627MHP	122.5	8618.5	0.0023	A	308.09
9	GE 5251R	18-1807	25.0MHP	30.769MHP	123.1	8774	0.0023	A	308.55
10	GE 5251R	18-1808	25.0MHP	31.160MHP	124.6	8580	0.0023	A	313.64
11	GE 5251R	18-1809	25.0MHP	31.051MHP	124.2	8777	0.0023	A	310.29
12	GE 5251R	18-1810	25.0MHP	31.210MHP	124.8	8777	0.0023	A	312.37
13	GE 5251R	18-1811	25.0MHP	30.947MHP	123.8	8474.5	0.0023	A	312.02
14	GE 5251R	18-1812	25.0MHP	31.167MHP	124.7	8775.5	0.0023	A	313.29
15	GE 5251R	18-1813	25.0MHP	26.107MHP	104.4	8594	0.0023	A	270.28
16									
17	Broach	18-1491	28.3MMBtu	28.42MMBtu	100.4	5846.5	0.00058	A	32.88
18	Broach	18-1492	28.3MMBtu	28.42MMBtu	100.4	6967.5	0.00058	A	32.88
19									
20	Cummings	18-1522	255HPDiesel	255HPDiesel	100	521.12 g/hp-hr		A	- -
21									
22	Gen Motors	18-2897	2500KW	3.6MHP	--	961.12g/hp-hr		A	- -
23	FFGU								
24									
25	BS&B	21-1239	2.3MMBtu	2.305MMBtu	100.2	328.7	0.0008	A	2.665
26	BS&B	21-1240	2.3MMBtu	2.30MMBtu	100	320.5	0.0008	A	2.66
27	Eclipse	21-1401	10.6MMBtu	9.53MMBtu	89.9	6748	0.00058	A	11.03
28	Eclipse	21-1411	10.6MMBtu	9.32MMBtu	87.8	2621	0.00058	A	10.77
29									
30									
31									
32									
33									

Note 1. 1988 was a Leap Year, and had 8784 hours.

	J	K	L	M	N	O	P
1	Fuel Consumption	Fuel Heat Content	Emission Rate	Actual Emissions	Potential Emissions	Analyzed Emissions	Permitted Emissions
2	Max (mscf/hr)	(Btu/scf)	(lb/hr)	(tpy)	(tpy)	(tpy) Note 4	(tpy)
3	335.26	865	0.719	3.119	3.377	48.5	NL
4	335.26	865	0.714	3.122	3.377	48.5	NL
5	335.26	865	0.682	2.971	3.377	48.5	NL
6	335.26	865	0.71	3.067	3.377	48.5	NL
7	335.26	865	0.703	3.022	3.377	48.5	NL
8	335.26	865	0.709	3.054	3.377	48.5	NL
9	335.26	865	0.71	3.113	3.377	48.5	NL
10	335.26	865	0.721	3.095	3.377	48.5	NL
11	335.26	865	0.714	3.132	3.377	48.5	NL
12	335.26	865	0.718	3.153	3.377	48.5	NL
13	335.26	865	0.718	3.041	3.377	48.5	NL
14	335.26	865	0.721	3.162	3.377	48.5	NL
15	335.26	865	0.622	2.671	3.377	21.9	NL
16							
17	32.88	865	0.019	0.056	0.084	0.35	NL
18	32.88	865	0.019	0.066	0.084	0.35	NL
19							
20	- -	- -	0.063	0.0016	0.0016	- -	- -
21							
22	- -	- -	0.889	0.043	0.043	- -	- -
23							
24							
25	2.67	865	0.002	0.0004	0.009	1.3	NL
26	2.67	865	0.002	0.0003	0.009	1.3	NL
27	20.29	865	0.006	0.022	0.052	1.3	NL
28	20.29	865	0.006	0.008	0.052	1.3	NL
29							
30	TOTAL ALL SOURCES						
31	WITH PERMIT LIMITS						
32							
33	TOTAL ALL SOURCES			39.919	43.936	609.8	

Note 4. 1978 permit application (Dames and Moore) used AP-42 emission factor: 42 lbs/mmscf.

1980 permit application (Radian) used an emission rate of 0.63 g/sec = 21.9 tpy.

A	B	C	D	E	F	G	H	I
Source	Tag I.D. No.	ISO Rating	Actual Oper Rate	% Rated Cap	Hours of Oper	Emission Factor (lb/mscf)	Origin of Factor	Fuel Consumption Ave (mscf/hr)
1					Note 2			
2								
3	GE 5251R	18-1801	25.0 MHP	30.904MHP	123.3	4335.7	0.0023	A 311.8
4	GE 5251R	18-1802	25.0MHP	30.573MHP	122.3	4186.5	0.0023	A 309.94
5	GE 5251R	18-1803	25.0MHP	29.825MHP	119	4313.4	0.0023	A 299.88
6	GE 5251R	18-1804	25.0MHP	30.473MHP	121.9	4314.3	0.0023	A 306.7
7	GE 5251R	18-1805	25.0MHP	30.518MHP	122.1	4334.6	0.0023	A 305.08
8	GE 5251RATP	18-1806	25.0MHP	30.947MHP	123.8	4139.5	0.0023	A 307.75
9	GE 5251R	18-1807	25.0MHP	29.915MHP	119.7	4246	0.0023	A 302.66
10	GE 5251R	18-1808	25.0MHP	30.079MHP	120.3	4311.8	0.0023	A 305.43
11	GE 5251R	18-1809	25.0MHP	30.603MHP	122.4	4185.4	0.0023	A 305.9
12	GE 5251R	18-1810	25.0MHP	30.534MHP	122.1	4149.7	0.0023	A 307.51
13	GE 5251R	18-1811	25.0MHP	30.873MHP	123.9	4314.7	0.0023	A 306.24
14	GE 5251R	18-1812	25.0MHP	31.167MHP	124.7	4184.5	0.0023	A 312.02
15	GE 5251R	18-1813	25.0MHP	30.377MHP	121.5	4203.6	0.0023	A 305.2
16								
17	Broach	18-1491	28.3MMBtu	28.42MMBtu	100.4	3425.8	0.00058	A 32.88
18	Broach	18-1492	28.3MMBtu	28.42MMBtu	100.4	4086.3	0.00058	A 32.88
19								
20	Cummings	18-1522	255HPDiesel	255HPDiesel	100	521.12g/hp-hr	A	- -
21								
22	Gen. Motors	18-2897	2500KW	3.6MHP		961.12g/hp-hr	A	- -
23	FFGU							
24								
25	BS&B	21-1239	2.3MMBtu	*	0	0	0.0008	A 0
26	BS&B	21-1240	2.3MMBtu	*	0	0	0.0008	A 0
27	Eclipse	21-1401	10.6MMBtu	12.07MMBtu	113.9	4143	0.00058	A 13.97
28	Eclipse	21-1411	10.6MMBtu	11.13MMBtu	90.8	201	0.00058	A 11.13
29								
30								
31								
32								
33								

Note 2. Hours of Operation are for the first 6 months of 1989.

Note3. Actual hours of operation were doubled to represent all of 1989 for calculation purposes.

* The BS&B heaters were taken off-line in 1988, and decommissioned. These sources did not operate in 1989.

	J	K	L	M	N	O	P	Q
1	Fuel Consumption	Fuel Heat Content	Emission Rate	Actual Emissions	Potential Emissions	Analyzed Emissions	Permitted Emissions	
2	Max (mscf/hr)	(Btu/scf)	(lb/hr)	(tpy) Note 3	(tpy) Note 3	(tpy)	(tpy)	
3	335.26	865	0.717	3.009	3.377	48.5	NL	
4	335.26	865	0.713	2.984	3.377	48.5	NL	
5	335.26	865	0.69	2.975	3.377	48.5	NL	
6	335.26	865	0.705	3.043	3.377	48.5	NL	
7	335.26	865	0.702	2.905	3.377	48.5	NL	
8	335.26	865	0.708	2.93	3.377	48.5	NL	
9	335.26	865	0.696	2.956	3.377	48.5	NL	
10	335.26	865	0.702	3.029	3.377	48.5	NL	
11	335.26	865	0.704	2.945	3.377	48.5	NL	
12	335.26	865	0.707	2.935	3.377	48.5	NL	
13	335.26	865	0.704	3.039	3.377	48.5	NL	
14	335.26	865	0.718	3.003	3.377	48.5	NL	
15	335.26	865	0.702	2.951	3.377	21.9	NL	
16								
17	32.88	865	0.019	0.065	0.084	0.35	NL	
18	32.88	865	0.019	0.078	0.084	0.35	NL	
19								
20	- -	- -	0.063	0.0016	0.0016	- -	- -	
21								
22	- -	865	0.889	0.043	0.043	- -	- -	-
23								
24								
25	0	865	0	0	0	1.3	NL	
26	0	865	0	0	0	1.3	NL	
27	20.29	865	0.008	0.034	0.052	1.3	NL	
28	20.29	865	0.006	0.001	0.052	1.3	NL	
29								
30	TOTAL ALL SOURCES							
31	WITH PERMIT LIMITS							
32								
33	TOTAL ALL SOURCES			38.927	43.918	609.8		

Equivalence Between Emission Factors and PPM for CCP Sources

Source	NO _x		CO	
	lb/mmBtu	ppm	lb/mmBtu	ppm
GE 5251R	0.401 ¹	98.5	0.018 ²	7.5

1. The emission rate identified is the average emission rate determined from the previous 1.5 years of field data. The maximum emission rate used to calculate the "potential" emissions is 0.418 lb/mmBtu (101.68 ppm) NO_x.
2. The emission rate identified is the average emission rate determined from the previous 1.5 years of field data. The maximum emission rate used to calculate the "potential" emissions is 0.048 lb/mmBtu (20 ppm) CO.

EXHIBIT II
GHX-1 Application
Derivation of Emergency Diesel Generator Emissions

Emission factors were taken from AP-42, Table 3.3-1. The sulfur content of the diesel fuel used to estimate the generator SO₂ emissions is not indicated in AP-42. The emission factors used are in units of grams per horsepower per hour. Actual annual emergency generator emissions in tons were estimated using the horsepower rating of the generator and the actual number of hours of operation. In order to verify readiness to operate in an emergency, the emergency power generator is run for an 8-hour test each month, and the firewater pump is run for a 1-hour test each week. Actual emergency operation is not included and is not expected to be significant.

$$EF_{NOx} = 14.0 \text{ g/hp-hr}$$

$$EF_{CO} = 3.03 \text{ g/hp-hr}$$

$$EF_{SO_2} = 0.931 \text{ g/hp-hr}$$

$$EF_{PM} = 1.00 \text{ g/hp-hr}$$

$$EF_{VOC} = 1.12 \text{ g/hp-hr}$$